

# CONNECTIONS

VOL. 14 No. 1 ■ MARCH 1989

SPRING ISSUE

## Communication Software: A Hot Topic



**Lee Harbin**  
Product Manager  
Communications Products

Communication software is now a strategic asset and has become the key to information management for the remainder of this decade. Servicing the demands of high volume transaction processing requires a unique combination of sophisticated communication capabilities, resource efficiency, and high performance. Communication software

promises to be a hot topic of the 1990's. As usual, Software AG has anticipated this trend.

Software AG is introducing two Communication products, ADABAS Transaction Processing Facility (TPF) and ADABAS High Performance Environment (HPE). These products are designed to be used in conjunction with ADABAS to provide an Advanced Data Base Management environment.

### **ADABAS TPF: The Specialized Transaction Processing Facility**

ADABAS TPF is designed to provide NATURAL with a unified run time environment so that applications can take full advantage of NATURAL's flexibility and func-

tionality, irrespective of the tele-processing system being used. The introduction of ADABAS TPF is fully transparent to the users. When typing in the name of the application, the TP-system issues a call to ADABAS TPF, which performs the appropriate security checks, activates the desired application and connects it directly to the user on the terminal. Only the terminal I/Os are still performed by the TP-system.

ADABAS TPF oversees the interactive execution of programs and manages access to shared system resources. Program processing occurs in one of a fixed number of main storage areas within ADABAS TPF, called threads, which run as standard OS subtasks. A large number of concurrent processing programs is accommodated by swapping thread areas in and out between main and secondary storage (rollin/rollout). A program is rolled out to secondary storage each time it issues a terminal write and is rolled in again when the user presses an interrupt key. This technique allows interactive programs to run conversational and eliminate all reentrancy and reusability restrictions, even under transaction-oriented TP-monitors such as CICS or IMS/DC. In addition, an application can be relocated to another thread if the original becomes heavily loaded, providing maximum processing overlap in environments with high transaction rates.

*continued on page 4*

## New NATURAL Products Released

**Norman Nicholson**  
Product Technology Group

Software AG has released several new products in the NATURAL area which will enable the NATURAL programmer to access alternate data base types.

### **NATURAL DB2 V1.1.1**

The first of these newly-released products is NATURAL DB2 V1.1.1. It allows a NATURAL program to access DB2 data bases by converting NATURAL data manipulation language into SQL. This first version then runs generated SQL dynamically. There are very few restrictions on NATURAL statements that can be used. NATURAL 2.1 SM04 is a prerequisite for this product. Support is currently provided for batch, TSO, and CICS (both conversational and pseudo-conversational).

Plans for the next release are already well advanced and in test. Highlights include:

- Static SQL support
- A NATURAL application that allows the DB2 DBA to issue DCL/DDDL statements to, for example:
  - Create or drop a table, index, storage group, etc.
  - Grant or revoke authority to a user for some operation
- Support for IMS/DC and COM-LETE (will also require COM-LETE 4.5)
- VSE and VM versions will support access to SQL/DS

*continued on page 5*

### **Inside This Issue:**

President's Message—page 2  
NATURAL CONNECTION  
Highlights—page 3  
SAGGROU Representative's  
Updates—page 14

# President's Message



**Bill Wagner**  
The University of Texas at Austin

When I receive a phone call and hear the person on the other end of the line say something like "I've got some good news and some bad news for you", I always have more than a little apprehension. Such was the case when Marty Henderson, SAGGROUP's Technical Support Evaluation Chairman, called me a few months ago. In this case, the apprehension was justified. His good news was that he had received a promotion to the Auditing Department at Marathon Oil; the bad news was that his new management did not want him to continue with his work on the SAGGROUP Executive Committee. Besides doing an excellent job in the design of the new Technical Survey that you should all have received in January, Marty brought a unique outlook and perspective to our meetings. And of course, his exploits at the Nashville conferences are legendary. We all wish him nothing but the best in his new career. Richard Golden of Louisiana Gas Service Company has taken over the responsibilities of Technical Support Evaluation Chairman. His address and phone number are listed on the last page of this issue of CONNECTIONS. Welcome aboard, Richard.

And speaking of the Technical Survey, I hope that more than 15% of the user community sends in their responses this year. The value of the survey lies in showing Software AG how the users perceive the company to stand in relation both to other software vendors and to their own performance over the past years. Unless the surveys are returned by a representative sample of the user community, the results are not necessarily accurate. It is in the best interests of both the users and Software AG to have meaningful results from this survey. If you haven't yet returned yours,

please fill it out and mail it in today.

In my last column, I discussed the new Technical Advisory positions that were created by Constitutional amendment at the Nashville conference, and urged you to take advantage of these positions by volunteering your time and talents in support of specific Software AG products. As you read the reports by the various Functional Area Representatives in this issue, you'll

see that many of your colleagues have done just that. Since these positions are new and their responsibilities somewhat nebulous, this is an excellent opportunity to create a position and role suited to your personal interests and skills. There are still some products that do not have Technical Advisors, so all it takes is a phone call to a Functional Area Representative to become an important contributor to the success of SAGGROUP.

## Table of Contents

<b>Software AG News</b>	<b>PAGE</b>
Communication Software: A Hot Topic	1
New NATURAL Products Released	1
Special Price Offer For New Product— NATURAL PROFESSIONAL VMS	3
Make the NATURAL CONNECTION to Integrated Micro-Mainframe Technology	3
NATURAL SECURITY 2 Cross Reference	5
Connections — Contributions Please . . .	6
VM-PASS: Powerful VM Session Management	7
The Latest VAX/VMS News	7
Recapping NATURAL ELITE	8
NATURAL SECURITY 2 User Exit for Applications	8
UCTRL: A Utility in COM-LETE V4.4.2	9
Product Status Report	24
<b>Users' Group News</b>	<b>PAGE</b>
President's Message	2
Solid State Disk Evaluation	12
Australia Users' Conference	12
7th Annual Southeast Asia Software AG Users' Group Meeting	13
The 9th Annual Israel Users' Group Conference	13
ADABAS Product Representative Update	14
Communications Functional Area Representative Report	14
Recap of SAGGROUP (VMS) UK Newsletter	15
<b>Regional Reports</b>	<b>PAGE</b>
New England Region	18
Southeastern Region	18
Midwest Region	19
Southwest Region	20
Sierra Pacific Region	21
Pacific Southwest Region	22
Northwest Region	22

## Special Price Offer For New Product— NATURAL PROFESSIONAL VMS



Mary Kirkman  
VMS Product Manager

### Free Product Offer!

NATURAL PROFESSIONAL, a collection of four components which give NATURAL programmers greater flexibility in designing and developing 4th Generation applications, has been officially released! And, for a limited time, NATURAL PROFESSIONAL is available to all existing NATURAL VMS users AT NO CHARGE!

Between now and December 31st of this year, you may receive NATURAL PROFESSIONAL free of charge; you simply agree to take on normal, annual maintenance fees—which don't begin until January, 1990!

### Why Order Now?

Depending on your Group Pricing structure, this offer provides an initial savings of anywhere from \$3,130 to \$25,000! (These license fees take effect on Jan. 1, 1990.) And, because maintenance fees don't begin until January, 1990, you can receive free use of NATURAL PROFESSIONAL for the entire year by ordering right away!

This means you'll get nearly 8 months of free usage of this new product—and never pay an initial license fee—by ordering now!

### Why NATURAL PROFESSIONAL?

NATURAL PROFESSIONAL greatly speeds the development of NATURAL VMS programs, and will be particularly useful in the areas of problem fixing, application performance, analysis, and functionality. NATURAL PROFESSIONAL consists of four components:

- NATURAL (VMS) DEBUG Utility extends the test and analysis options for large applications;
- NATURAL (VMS) MONITOR registers individual statements in programs, and helps you monitor performance and scope of NATURAL programs;
- NATURAL (VMS) VERIFY allows validation of the functionality of different application versions; and
- NATURAL (VMS) LANGUAGE SENSITIVE EDITOR (LSE) facili-

tates the editing of NATURAL source code.

### What Do I Do Now?

To order NATURAL PROFESSIONAL, contact your local SOFTWARE AG Sales Representative—or call me, toll-free: 1-800-843-9534, and I'll give you complete details. But don't wait! THE SOONER YOU ORDER NATURAL PROFESSIONAL, THE LONGER YOU CAN USE IT—FOR FREE!

## Make the NATURAL CONNECTION to Integrated Micro-Mainframe Technology



Doug Wheeler  
Product Manager

The explosive demand for timely, accurate information and convenient access to that information has resulted in a mixture of applications and environments which may be driven from either the PC or the mainframe. One of the key ingredients to a successful software strategy is the integration of those PC and mainframe environments. An ideal solution would support more than just a link between microcomputers and the mainframe. The ultimate potential of this combination is a synergistic relationship in which PC and mainframe computers combine to enhance individual productivity in ways that neither can achieve separately. NATURAL CONNECTION offers you this synergistic solution.

### Integrated Connectivity

NATURAL CONNECTION enables PC Workstation users access to the

full integrated capabilities of Software AG's open Integrated Software Architecture. For example, in conjunction with Software AG's distributed data processing technologies, the user can easily and transparently utilize NATURAL as the gateway to application or system data that is maintained on a remote CPU within the network. This scope is further extended via NATURAL-based products such as NATURAL PROCESS that provide access to host operating system services and data center management facilities. NATURAL provides for data transfer at the field level, affording you an incredible flexibility of data access.

Another important component of this NATURAL integration is that the facilities of NATURAL CONNECTION can be automatically used by any other NATURAL-based subsystem. Thus, related NATURAL products such as CON-NECT and SUPER NATURAL may utilize the capabilities of NATURAL CONNECTION via standard NATURAL syntax.

With the latest release of NATURAL CONNECTION, we have taken a giant leap forward. NATURAL CONNECTION has been

# Communication

continued from page 1

ADABAS TPF intercepts errors during program execution without loss of thread integrity or interruption of processing in other threads. Each thread is maintained under a different hardware protect key to prevent storage violations. An additional key is used to protect storage owned by the nucleus. This guarantees exceptional stability and eliminates the need of separate systems for production and test environments.

A set of interactive utilities provides vital tools for access to system services for the system administrator. All of them may be invoked with direct commands. Interfaces provide support to security packages such as RACF, ACF2 and TOP SECRET and to the COM-LETE Security System. ADABAS TPF supports multiple concurrent sessions through its parallel program access facility. Users can suspend an interactive session by switching to another application or utility, and resume the original session at any time from the point of suspension.

ADABAS TPF extends NATURAL's power, flexibility and ease of use. It complements NATURAL's interactive design by providing efficient management of its conversational operation. Reports can be routed to one or more printers from one single online program. In addition, batch NATURAL output can be spooled easily to network printers. Online and batch access to SD files is provided. Reports can also be displayed in graphic format via NATURAL Graphics' interface to IBM's GDDM/PGF facility.

When using REVIEW, the performance monitor will provide additional detailed information on all NATURAL usage, such as:

- NATURAL program usage (CPU, storage, number of ADABAS calls)
- NATURAL buffer pool usage
- Response times per program
- Usage per NATURAL user
- Usage per ADABAS file

A full range of execution-time services is provided to application programs written in NATURAL, as well as in COBOL, PL/I, FORTRAN, ASSEMBLER or any other programming language that observes standard IBM calling conventions. These execution-time services are:

- Access to ADABAS data bases
- Standard file I/O functions (VSAM, BDAM, ISAM)
- Access to Sequential Direct (SD) files
- Message switching and printout pooling
- Supervisor functions (obtaining and releasing storage, resource serialization, timer services, etc.)
- Task management function (LOAD, LINK, XCTL, ATTACH, FETCH)
- Remote Job Entry.

## Technical Information

### Hardware:

IBM 30XX, 43XX, 937X  
IBM compatible

### Software:

- Operating systems:  
MVS, MVS/XA, VSE/SP
- Pre-requisites:  
Any TP-system such as:  
CICS  
IMS/DC  
TSO  
CMS  
SHADOW
- Co-requisites:  
ADABAS  
NATURAL
- Related products:  
COM-LETE  
ADABAS HPE  
COM-LETE Security System

Compatibility and migration: ADABAS TPF provides full compatibility with all Software AG products. It is fully transparent for NATURAL applications.

### ADABAS HPE: High Performance Environment for ADABAS and NATURAL

ADABAS HPE has been designed to enhance the performance of NATURAL in an ADABAS TPF or COM-LETE environment. This is achieved by reducing the overhead for ADABAS communication by running both ADABAS and COM-LETE or ADABAS TPF in

the same address space, thus avoiding the need for cross-address space communication.

Multiple copies of ADABAS, COM-LETE or ADABAS TPF can run without any modification under ADABAS HPE in the same address space, opening up many possibilities particularly with MVS/XA. In multi-processor environments, the subtasks run on any available processor.

Subtasks and start-up parameters are defined to ADABAS HPE in a partitioned data set parameter file. Each subtask has the name of a member of that file. The members contain the definitions and options for that subtask, such as PARMs, Priority, program to be attached, library that contains the program, data sets to be dynamically allocated for the subtask, etc. The parameter file also contains a member (SYSPARM by default) which contains the start-up parameters as well as subtasks to be started by default.

ADABAS HPE provides three user exits: the subtask start user exit, which is called immediately prior to subtask attach, the subtask end user exit, which is called immediately prior to subtask detach and the operator command user exit which is called immediately prior to execution of an ADABAS HPE command or passing a command to a subtask.

If an abnormal termination occurs during an ADABAS HPE session, ADABAS HPE will intercept the abend and perform a check of its control blocks. If corruption is detected, HPE will attempt to terminate all subtasks cleanly and then deactivate itself.

If no corruption is detected and the maximum number of abends has not been exceeded, ADABAS HPE produces a snap dump and continues the session. If the maximum number of abends is exceeded, all subtasks are terminated cleanly and the abend continues. If a subtask abends, HPE ensures that the whole environment is not deactivated.

### Performance Considerations

ADABAS HPE considerably reduces the communication overhead between the data base and the applications since GLOBAL POSTs are substituted by LOCAL POSTs.

YES, Please send me additional information on:

- |  |  |
|--|--|
| <input type="checkbox"/> NATURAL DB2                                     | <input type="checkbox"/> NATURAL ELITE-Computer Based Training                   |
| <input type="checkbox"/> NATURAL DL/1                                    | <input type="checkbox"/> Please Include me on the Customer Training Mailing List |
| <input type="checkbox"/> VM-PASS Session Manager                         | <input type="checkbox"/> Other _____   |
| <input type="checkbox"/> ADABAS TPF & ADABAS HPE—Communications Products | _____  |
| <input type="checkbox"/> NATURAL CONNECTION                              | _____  |

NAME \_\_\_\_\_

TITLE \_\_\_\_\_

COMPANY NAME \_\_\_\_\_ CUSTOMER # \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

TELEPHONE \_\_\_\_\_



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Therefore, ADABAS HPE is applicable for environments with high CPU usage and high ADABAS call rates.

#### Technical Information

##### Hardware:

IBM 30XX, 43XX

##### Software:

- Operating systems:  
MVS, MVS/XA
- Pre-requisites:  
ADABAS
- Co-requisites:  
COM-LETE  
ADABAS TPF

#### Summary

For more information on ADABAS TPF and/or ADABAS HPE, please contact your Software AG Account Representative or call Software AG at 1-800-843-9534. Also, you can refer to the enclosed information card to send for more information.

## NATURAL

*continued from page 1*

#### NATURAL DL/1

The second new product is NATURAL DL/1, which has been released at the 2.1.3 level for both DOS and OS. This product has been available in Europe since 1985, but has only recently received attention here in America, primarily because of interest from users converting from IMS to DB2.

In spite of the name, NATURAL DL/1 supports access to DL/1 and IMS/DB data bases. It will work in batch and under CICS in VSE environments, and in batch, CICS, and IMS/DC environments under MVS. With this product, each segment of a DL/1 data base becomes a DDM to NATURAL. All lower level child segments also contain the key fields from their parent segments, which can, therefore, be used in a NATURAL "FIND" statement to position the program directly to lower level segments.

NATURAL DL/1 SM03 is compatible with NATURAL 2.1 SM03 and SM04. In addition, PREDICT 2.3.2 supports the generation and incorporation of DL/1 DDMs.

#### IMS/DC Driver

Lastly, Software AG has released, as a standard component of NATURAL 2.1 SM04, the IMS/DC Driver. NATURAL Programs running under IMS/DC can reference ADABAS or IMS/DC data bases and, shortly, with the release of NATURAL DB2 1.1.2, DB2 data bases, as well.

#### Additional Information

If you need additional information or have questions concerning any of these new NATURAL products, please contact your local Software AG office.

## NATURAL SECURITY 2 Cross Reference

Lisa Crispin and Wendy Crist  
*Product Technology Group*

NATURAL-based products have special requirements when installed in a NATURAL SECURITY environment. If these requirements are overlooked, the product may not operate correctly. An overview of special considerations for base NATURAL and "add-on" products is presented below.

When NATURAL SECURITY 2 is newly installed, the only application defined is SYSSEC. The security administrator needs to define not only the applications for user-written programs, but applications used by NATURAL and all products which run under NATURAL. NATURAL administration applications which must be defined are: SYSERR, SYSDBA, SYSDDM, SYSMAIN2, and SYSTAT. These may be defined as public- or people-protected and may have MENU as the start-up program. As other products are installed, their requirements under NATURAL SECURITY must be met with appropriate definitions and profiles. The following guidelines for proper installation and operation of prod-

ucts under NATURAL SECURITY 2 will help the process go smoothly.

Before installing any product in a NATURAL SECURITY system file, read the following carefully:

- NATURAL SECURITY Installation Notes
- Installation and release documentation for the product

Note: The releases for base NATURAL 2 and NATURAL SECURITY 2 must correspond; e.g., NATURAL SECURITY 2.1.4 will only run with base NATURAL 2.1.4.

Some general guidelines for installation under NATURAL SECURITY are:

- Leave start-up, restart, and error programs blank during install
- Allow command mode for installation
- Logon to SYSERR for loading errors

- Make sure initial logon is in NATURAL SECURITY format if using AUTO=OFF. That is,
- APPLICID, USERID, PASSWORD where APPLICID is application name
- Use IM=D in NATPARM or dynamic parm override for installation jobs
- Verify that the NATPARM or dynamic overrides contain the correct values for FSEC, FUSER, FNAT, FDIC, etc.

Refer to product instructions for information on how to set up the product under NATURAL SECURITY. You will need to know what applications must be defined in SYSSEC, what should be included in the application definition and profile, how various functions can be allowed or disallowed and other considerations. This information can usually be found in the installation or reference manual for the product, and/or in the product release notes.

*continued on page 6*

# NATURAL SECURITY

continued from page 5

For example, here are locations of NATURAL SECURITY setup documentation for some current product versions:

- SUPER NATURAL 2.2.1 or 2.2.2: Installation and Maintenance Manual, p. 4-5 and p. 5-69 to 5-71
- PREDICT 2.2.2 and 2.2.3: Reference Manual, Chapter 13
- NATURAL ELITE 1.3.2 and 1.3.3: Installation and Maintenance Manual, p. 1-9
- NATURAL CONSTRUCT 2.1.2 or 2.1.3: Installation and Operations Manual, p. 2-7 (2.1.2), p. 2-9 (2.1.3), 3-2, 3-3
- NATURAL ADVANCED FACILITIES 2.1.3: Installation Notes
- NATURAL CONNECTION 2.1.3: Installation Notes
- CON-NECT 2.1.2: Installation and Operations Manual, Section 2.5

Figure 1: Summary of Requirements for Each Product Under NATURAL SECURITY Version 2

PRODUCT	APPLICATIONS	START-UP PROGRAM	ADDITIONAL REQUIREMENTS
SUPER NATURAL	SYSSN	MENU	Restart program = MENU, Error program = SNRTE. Command mode disallowed; people protected. Mode = R.
PREDICT	SYSDIC SYSDICCO SYSDICBE	MENU MENU	HELP must be allowed. Command mode may be allowed for online use. For batch, command mode must be disallowed with MENU specified as start-up.
NATURAL ELITE	SYSCAI	CAI	Command mode must be allowed. May restrict ADMIN and AUTHOR.
CON-NECT	SYSCNT2 SYSCNT2B SYSCNT2C SYSCNT2H	MENU MENU MENU MENU	SYSCNT2C is only necessary if converting from CON-NECT Version 1.
REVIEW	REV310	MENU	MODE = R.
NATURAL CONSTRUCT	SYSNCST		May people protect. If STEPLIB other than SYSTEM, copy NCSTG, NCSTH, NCSTERR, CD* and CC* to STEPLIB. Copy CDGDA to libs with CONSTRUCT-generated programs or where NCSTG is used.
NATURAL ADVANCED FACILITIES	SYSPOOL SYSPRINT NATRJE	MENU NSPPDIBM	SYSPRINT must be terminal protected. Set up group with CICS printers as terminal members with default application SYSPRINT; link to SYSPRINT.
NATURAL CONNECTION			Copy SECHECK module to SYSTEM.
Base NATURAL	SYSERR SYSDDM SYSMAIN2 SYSTAT SYSDBA		MENU may be used as start-up for all of these.

Figure 1 is a summary of requirements for each product under NATURAL SECURITY Version 2. If you are using earlier versions of

these products under NATURAL Version 1, refer to product documentation for those versions.

## Connections—Contributions Please...

Pam Ellis  
Editor

The Connections newsletter is produced quarterly by Software AG. Connections provides a forum where Software can update users on the latest product releases and versions as well as technical information. Most importantly, Connections is a vehicle by which users can share information and their experiences with other Software AG users. Past issues have seen an increase in contributions from the user community. However, there are still many more of you out there we have never heard from. Please take a minute to think about sharing your experiences with Software AG products, updating people on SIG and BIG activities, or sending your recent regional report minutes.

Contributions can be sent directly to:

Pam Ellis  
Software AG  
11190 Sunrise Valley Drive  
Reston, VA 22091

When sending contributions please include your name and your company name. Many times this information is not included and credit cannot be given. Also, when sending regional reports please include the date and location of the meeting as well as full name and company name of any person mentioned in the report. Providing this information makes it easier to acknowledge the appropriate people.

We hope to hear from you! Below are the editorial deadlines for future Connections. If you have any questions please contact me at 703-391-6720.

### Future Connections

Summer Issue—  
June 1989

Editorial Deadline—  
May 1st

Fall Issue—  
September 1989  
(Pre-conference issue)  
Editorial Deadline—  
July 17th

Winter Issue—  
December 1989  
(Post-conference issue)  
Editorial Deadline—  
November 6th

# VM-PASS: Powerful VM Session Management

Lee Harbin

Product Manager  
Communications Products

Software AG is pleased to announce the release of VM-PASS. VM-PASS is a versatile and powerful answer to the problem of session management in VM environments. VM-PASS opens access to any active data communications system and allows users to suspend one application and switch to another at the touch of a single key without the LOGON/LOGOFF process, hardware modification, or changes to existing applications. The application-switching of VM-PASS supports functions that provide a simple activation and immediate switching between pre-defined applications or transactions.

A VM-PASS session can be started either by the dial command or, if the terminal is defined as a dedicated device, immediately after switching on the terminal. VM-PASS presents the logon screen, where user ID and password must be entered. When the logon process is finished, the VM-PASS Activity Table is presented. It displays information about the VM-PASS session and any current VM sessions, each line representing one session. Sessions are started by typing in the name of the VM or by pressing the corresponding PFkey. Logon data is automatically passed to the VM. A PASS-character or PFkey is used to suspend a session and jump to the V.A.T. or to any other session. VM-PASS commands can be issued from a VM session using the PASS character. VM sessions can be ended in any usual manner or automatically by VM-PASS when a LOGOFF command is issued. The DISCONNECT command frees the terminal but leaves the VM-PASS session active so that it can later be reconnected from any terminal. VM-PASS issues a DISCONNECT command automatically whenever a terminal is switched off. SEND and BROADCAST functions support message switching between all users defined in the system.

## Windows/3270

The WINDOWS/3270 Component enables the simultaneous display of several sessions being run on one terminal. Each session is displayed

on a rectangular portion of the screen called a window. Each VM application can be controlled from the window in which it is displayed. WINDOWS/3270 commands enable the control of a variety of window attributes such as size, position and contents.

## Optimize/3270

The OPTIMIZE component of VM-PASS compresses the datastream between the terminal and the application to the minimal required size. The following 3 techniques can be used:

- Repeat to address
- Net change comparison
- Input optimization

The repeat to address technique compresses long strings of repeated characters. Only the repeat-to-address command, the character, and the number of occurrences are transmitted.

The net change comparison technique produces a datastream containing only the differences between the last screen and the next one to be displayed, based on a field by field or character by character comparison.

The input optimization makes use of the Modified Data Tags. Most applications set all MDT's when expecting an input from a terminal, so all fields are transmitted, even the unchanged.

OPTIMIZE resets all MDT's after saving the original screen. The 3270 Hardware then transmits only the modified fields and OPTIMIZE hands all fields to the application, using the stored screen. These techniques reduce the datastream to be transmitted between 40 and 80%.

## Help/3270

The HELP/3270 component makes it possible to insert help-systems in existing applications without changes to them. These help systems support all users by displaying windows of help information. All information can be defined interactively, online and without programming efforts.

## Summary

For more information on VM-PASS, Software AG's VM Session Manager, contact your Software AG Account Representative or call Software AG at 1-800-843-9534. Or refer to the enclosed information card to send for more information.

## The Latest VAX/VMS News

Steve Sylvester

Product Technology Group

We enjoyed seeing many of you again at Software AG's 1988 International Users' Conference, as well as meeting some of you for the first time.

The 1988 Conference included many VMS-oriented presentations which covered the functions and features of future products, as well as internals for present products. If you missed some of those sessions, Conference tapes are available (as noted elsewhere in this issue of Connections).

## VMS Product Update

It's becoming difficult to keep track of the many VMS products currently available! Every single VMS product has had a new version or patch level released within the last few months. We have also had some new products released—such as NATURAL GRAPHICS, SECURITY, and PROFESSIONAL.

Current version numbers of VMS products are:

ADABAS	1.5/0 PL 1
NATURAL	1.4/1 PL 0
NET-WORK	1.3/0 PL 0
PREDICT	1.0/0 PL 1
ADABAS SQL	1.3/1 PL 0
CONSTRUCT	1.1/1 PL 1
SUPER NATURAL	2.1/1 PL 0
NATURAL GRAPHICS	1.0/0 PL 0
NATURAL SECURITY	1.0/0 PL 0
NATURAL PROFESSIONAL	1.0/0 PL
CONVERT	1.0/1 PL 0
ELITE	1.3/1 PL 1

For additional information regarding any VMS product, please contact your local Software AG office.

# Recapping NATURAL ELITE

Susan Lowy  
Product Technology Group

We have recovered from the busy schedules that we maintained during Software AG's International Users' Conference in Nashville! We conducted approximately 35 demonstrations on the newest version of NATURAL ELITE 1.4.1. For the first time, ELITE will be able to run completely under NATURAL 2, which is especially helpful when you want to suspend a lesson and actually get into NATURAL 2 for the workshops.

In addition to the demos, we presented five different sessions at the Conference. One ELITE staff member gave a talk entitled *Integrating NATURAL ELITE Into an Effective Training Strategy*, as well as one on *Tips and Techniques for ELITE 2*. Susan Kaplar presented a detailed discussion on our newest venture: customized courseware. I presented an instructional session on customizing off-the-shelf ELITE courseware, and Gene Miklovich, Software AG of Canada, made a presentation on the ELITE VMS courseware.

The newest courseware that we have been working on is the ADABAS 5 series. In December, the *ADABAS Fundamentals* and the *ADABAS Program Design (Direct Calls)* courses went to beta testing;

we anticipate a January release for both. The *ADABAS Fundamentals* course focuses on the basic components that are unique to ADABAS, such as inverted lists, address converter, etc. The *ADABAS Program Design* course teaches the student how to complete the control blocks so that a non-fourth generation program can access ADABAS.

The *ADABAS File Design* course will be ready for beta testing in early January, with an expected March release. This course covers all aspects of designing files for efficient use of ADABAS. The *ADABAS Utilities* course should be ready for beta testing in April, resulting in a June release date. This course enables the ADABAS user to learn about all of the utilities associated with it.

## Current ELITE Courseware

Periodically, we like to present a listing of the ELITE courses that are currently available for purchase:

**How to Use ELITE:** June 1986, SM02 February 1988

**SUPER NATURAL Fundamentals:** January 1987, SM01 Spring 1989

**Advanced SUPER NATURAL:** January 1987, SM01 Spring 1989

**SUPER NATURAL Administration:** March 1987, SM01 Spring 1989

**NATURAL 2 Enhancements:** July 1987

**NATURAL 2 Introduction:** November 1987

**NATURAL 2 For the Business Professional:** December 1987

**NATURAL 2 Intermediate Structured Programming:** April 1988

**NATURAL CONSTRUCT Fundamentals:** July 1988

**ADABAS 5 Fundamentals:** January 1989

**ADABAS 5 Program Design (Direct Calls):** January 1989

**ADABAS 5 File Design:** Spring 1989

**ADABAS 5 Utilities:** Summer 1989

**PREDICT Fundamentals:** Spring 1989

**CON-NECT Electronic Mail:** Spring 1989

**CON-NECT Time Management:** Spring 1989

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# NATURAL SECURITY 2 User Exit for Applications

Wendy Crist  
Product Technology Group

## Introduction

NATURAL SECURITY Version 2 provides users with an area on the application or special link definition record in which to store information. This area is 250 bytes in length and is accessed and maintained through the user of four Security subprograms. These subprograms are:

- SNAAREXT—To read application data
- SNAASEXT—To store application data
- SNAUREXT—To read special link data
- SNAUSEXT—To store special link data

The subprograms are called by a user exit subprogram that is coded by the user. This user exit must reside in the SYSSEC library. The CALLNAT statement is used in the user exit to call the appropriate Security subprogram. Each CALLNAT statement to a subprogram passes five parameters. These parameters are:

- APPLID (A8)
- NAME (A32)—For use with SNAAREXT and SNAASEXT only
- USERID (A8)—For use with SNAUREXT and SNAUSEXT only
- MODIFIED (D)
- EXITDATA (A250)
- RETURNCODE (B2)

At this time, only the parameters USERID, EXITDATA, and RETURNCODE are used by the subprograms. The parameters APPLID, NAME, and MODIFIED are for future use and must be specified on each CALLNAT.

## Specifying the User Exit Subprogram

To use the user exit subprogram on a Security definition, the user exit subprogram and all related objects (e.g., maps) must be moved or copied into the SYSSEC library using SYSMAIN2. To invoke the user exit, the SYSSEC maintenance subsystem must be invoked and an add/copy/modify application or special link function selected for the desired application. When the

continued on page 9

# User Exit

continued from page 8

application definition screen is displayed, enter the user exit subprogram name on the field identified by USEREXIT under the heading TRANSACTIONS. When ENTER is pressed, the specified subprogram name is executed, and the data is added to the application or special link record on the FSEC file.

## Programming Specifics in SYSSEC

When the Security subprograms are used in the SYSSEC application by a user exit, the APPLID and USERID parameters are determined by the application-ID that is being maintained and by the USERID of the special link.

## Programming Specifics in User Applications

If the Security subprograms are used in a user application, the APPLID and USERID will default to the values of the system variables \*APPLIC-ID and \*INIT-USER.

When using the Security subprograms for special links

(SNAUREXT and SNAUSEXT), the USERID parameter can be modified by the user program used to call the subprogram. It is used in conjunction with the RETURNCODE parameter when calling SNAUREXT. When calling SNAUREXT, the RETURNCODE has two functions. As input to the subprogram along with USERID, it is used to read specific links for an application. The USERID is initialized to a starting value, and the RETURNCODE is set to an operand value of "EQ", "=", "GT", ">", "LT", "<", "GE", ">=", "LE", or "<=". After the call to SNAUREXT, the RETURNCODE parameter is used to indicate the success of the call. A return code of 0 indicates that the special link was found. A non-zero return code indicates that the special link was not found.

## Considerations

1. When creating a special link for an application, the EXITDATA (if it exists) from the application definition will be copied to the special link EXITDATA.

2. To use the Security subprograms in an application, the subprograms must be copied from the SYSSEC library to the application library or STEPLIB library.
3. To use the user exit subprogram in the SYSSEC application, the user exit subprogram and all related objects must be copied to the SYSSEC library.
4. EXITDATA is only available for application definitions. It is not available for user, file, or mailbox definitions.

## User Exit Example

A sample user exit subprogram is available. Please call Pam Ellis at 703-391-6720 or Michele Birgans at 703-391-6722 and give your name, company and address and we will send you a complete copy.

# UCTRL: A Utility in COM-LETE V4.4.2

Tom Olson

Product Technology Group

The release of COM-LETE Version 4.4.0 in December of 1987 saw many internal logic changes, in addition to the external changes the user community has seen. A new utility, UCTRL, was added to consolidate information available in many different places. There is also additional information which has not previously been directly available. When UCTRL was released in COM-LETE V4.4.0, it was only available to users with CONTROL status. With COM-LETE V4.4.2, this is no longer the case.

Only the use of the COMMAND line is now restricted to users with CONTROL status. When UCTRL is invoked, the main menu—consisting of 12 functions, an operand field, and an operator command line—is displayed. Each of these functions, described below, can be useful to you in tuning, trouble shooting, and general perusal of your system.

## CM Function

The CM function will display sys-

tem messages associated with the COM-LETE in which the user is working. Within this screen, the user can scroll backward and forward using PF keys.

## UA Function

The UA function, when invoked without an operand, will display information about all users currently logged on to this COM-LETE. From this screen, the specific VTAM LUNAME which the user is logged on to can be determined, as well as the time the user logged on, and the time the user last hit the enter key. In addition, such items as a user's account number and the number of MCALLS issued by the applications the user has invoked are also available. By specifying a User ID, all of this data is displayed for a given user. When using this function, keep in mind that there are additional data columns which are accessible by scrolling to the right or left using PF keys 10/11.

## TO Function

The TO function displays informa-

tion about terminals defined to this COM-LETE. By identifying a terminal as VTAM and giving the lines and columns at display time, incorrect bind information given at logon time may be identifiable. This just may be the data you need, for example, to find out why those new terminals in the payroll department won't work. A specific terminal name may be entered in the operand field to avoid having to scroll through all of your terminals, 15 at a time, until you reach the page with the terminal you desire.

## TS Function

The TS function will display the Terminal Information Block (TIB) for the terminal in hexadecimal. Certain key fields are displayed (in English) to the right and under the hex display. The operand field can be either the terminal name or the TIB number (in decimal). When you are having problems with a terminal or a specific type of terminal, the Customer Support Center will probably ask you for information from this screen or request a

continued on page 10

# UCTRL

continued from page 9

hardcopy to be submitted as part of your documentation.

## TT Function

The TT function gives you a snapshot of the status of COM-PLETE's threads. Such information as the program name, last COM-PLETE operation, and current status could prove to be vital to determining resolutions for "hung" users.

## QS Function

The QS function should prove to be very handy when your response times seem to drag and your users find their attention drifting. When the numbers on this screen start straying very far from zero on a frequent basis, it is time to re-evaluate thread configurations. Numbers in here represent user programs that have completed what they were asked to do and are now waiting to get back into the thread to continue interaction with their users.

## AI Function

The AI function provides some information on each of the DBIDs defined to COM-PLETE. Data shown here is very brief. While they are not displayed on the screen, PFK7 and PFK8 are available to scroll backward or forward, respectively, when more than one screen of DBIDs is available. Software AG's product REVIEW contains much more extensive information for those of you who are interested in delving into this area in more depth.

## OP Function

The OP function displays the in-core program directory (PROGRAMISD). It is used to avoid I/Os reading the PGMLIB directory entries in order to obtain the disk address of the program itself. If you have high load counts for most entries listed, you should consider increasing your PROGRAMISD parameter in your start-up parms. If you have quite a few entries in this list with single digit load counts, or the parm allows 1,000 entries and the list only contains 150 entries, you should lower this parm as each entry, used or not, occupies 16 bytes of PAGE-FIXED storage.

## IP Function

The IP function will give you a list of programs loaded at initialization time into the PGMLIBBUFFERS. Programs loaded here avoid a search of PGMLIB when called. Generally, these should have high use counts. Using the buffer activity display or taking the time to add the SIZE columns should be done often enough to ensure that the PGMLIBBUFFERS parm is not wasting significant amounts of virtual storage. If these entries show a DISABLED state, then check to see if STARTUPPGM=UPGMBP is in your SYSPARM for COM-PLETE.

## RP Function

The RP function displays the modules defined as resident in your SYSPARMS. Programs displayed here which consistently have no load counts are probably wasting virtual address space. Programs indicated as fixed are also needlessly tying up real storage frames if the load count is zero.

## RA Function

The RA function allows you to keep an eye on the rolling mechanism used by COM-PLETE. This is a snapshot of the buffer activity at that point in time. Tuning of the parameters affecting the roll buffers and data sets is covered in depth in the COM-PLETE Systems Programming Workshop.

## BA Function

The BA function shows statistics for the various buffer pools within the COM-PLETE address space. In addition to current values, high water marks are also available. This will give you a handle on what a more appropriate size for a specific buffer area might be. If the NATURAL buffer pool is used, statistics for it are also available by using the PF8 key. To return to the screen showing COM-PLETE's buffers, use the PF7 key. The GET FAILS column is important to keep an eye on. In all cases but the ROLLBUFFER, these failures result in either a wait or a rejection of this request. In the case of ROLLBUFFER failures, the thread task is forced to do the roll to disk.

## Conclusion

By putting this utility to work on a regular basis and keeping your system tuned, you should encounter fewer problems and have more time to receive praise from your users.

# NATURAL CONNECTION

continued from page 3

improved in a number of areas, but has also expanded to include a number of valuable functions.

## LAN Support

One copy of NATURAL CONNECTION can support up to 64 user ids on a Local Area Network (LAN). NATURAL CONNECTION will operate under all popular LANs such as NOVELL, BANYAN, IBM Token Ring, 3-COM, etc. Host communications are currently supported through three common LAN options:

- any SNA gateways that support IBMs standard HLLAPI interface,
- a Pathway board, or
- any NOVELL PCOX board.

## Complete System Tailoring

NATURAL CONNECTION allows you to customize your environment—from the screen colors to the cursor size. Menu creation is completed quickly and easily with lists of tasks to choose from. You may also create your own tasks to execute local programs (LOTUS, WORD PERFECT, etc.).

In addition, NATURAL CONNECTION supports an advanced script language which allows you to tie together tasks and keystrokes to perform common and repetitive tasks including complex host activities. For example, a common use is Logon/Logoff procedures.

These features, combined with NATURAL CONNECTION's extensive keyboard redefinition facilities, result in the ability to execute a series of activities at a single keystroke.

## Interactive Data Transfer

Bi-directional data transfer at the field level is available through NATURAL CONNECTION. Data can be automatically uploaded/downloaded directly to and from any of the supported formats

- Lotus
- Basic
- Symphony
- DIF
- Dbase III
- Binary and
- Ascii
- Multiplan

with no intermediate steps. Sophisticated compression techniques are

utilized for optimized data transfer between the PC and the host. Data transfer operations may also be executed in the background mode while the user is working with a local application in the foreground.

### Resident Services

Many of the important features within NATURAL CONNECTION have been made resident. The benefit of this approach is that the user enjoys an immediate response. For example, one of the key components is terminal emulation. Invoking terminal emulation is now literally instantaneous.

### Hot-key Invocation

Support is provided for requesting NATURAL CONNECTION services from within existing PC applications without destroying the current status of that PC application. Thus, a LOTUS user could "hot-key" to a host session and then automatically return to the local LOTUS session at the same status as before. Once again, the NATURAL CONNECTION services are resident, so the "toggle" responds immediately.

### Unattended Workstation

The unattended mode of NATURAL CONNECTION allows

the user to create tasks, such as data upload/download, to take place without human intervention at the PC. Many users are looking at these unattended procedures to schedule tasks at times when line charges at remote sites are at their lowest.

### Application Program Interface

The Application Program Interface (API) allows the integration of user written application programs that may call NATURAL CONNECTION services. For example, it is possible for a user written program to communicate via NATURAL CONNECTION with a NATURAL application on the host and operate in a cooperative fashion. This capability affords the development of applications that span both host and PC platforms.

### Supporting your environments

Vast majority of users are still using MS/DOS and NATURAL CONNECTION is available for that environment. For those of you running OS/2, NATURAL CONNECTION will operate in the "compatibility box" under the OS/2 operating system.

In terms of resources, NATURAL CONNECTION uses approximately

160k-198k of memory and approximately 900k of disk storage.

### Future Directions

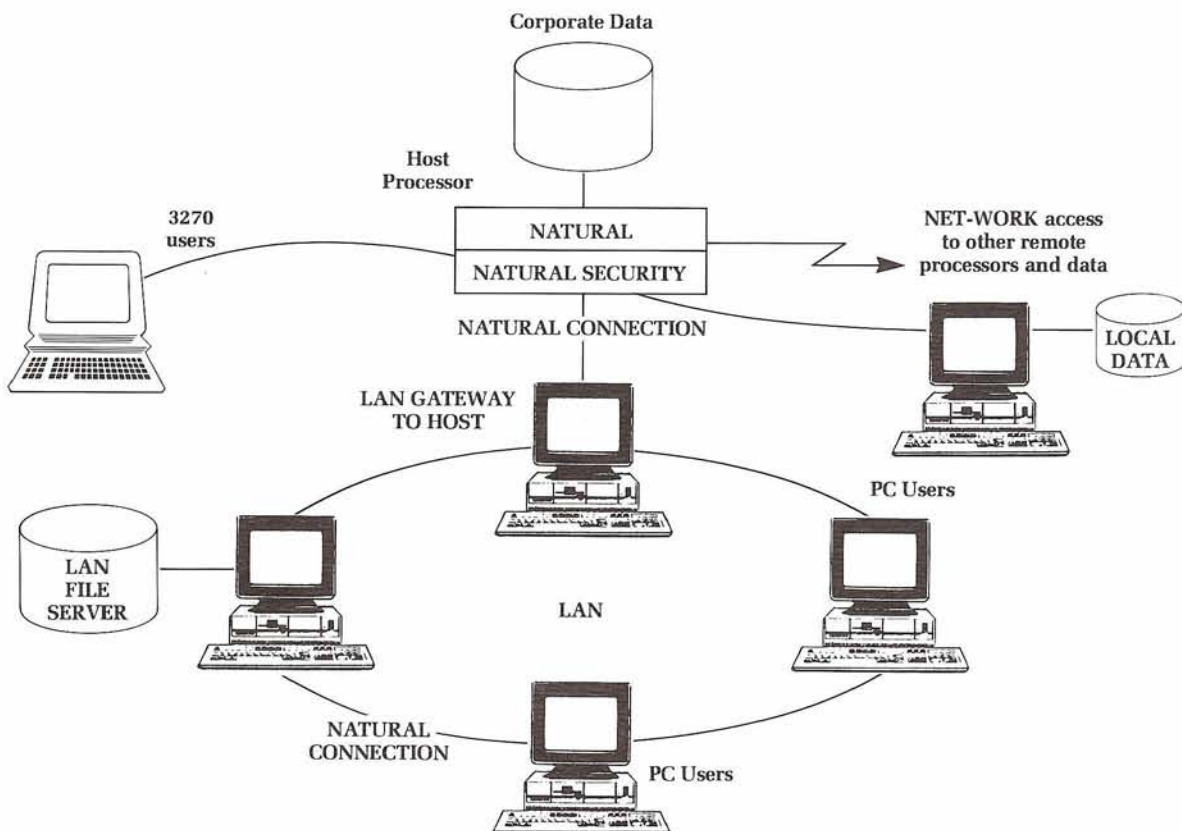
Future directions include extending NATURAL CONNECTION capabilities to the OS/2 environment (without requiring the compatibility box) and considering the implications of using the Presentation Manager interface.

Additionally, we have begun development for a version for the Apple Macintosh. We are very excited about the new capabilities this will offer and plan to enter the BETA test phase of NATURAL CONNECTION for the Macintosh in mid-summer of 1989.

There are a number of other products such as ADABAS/NATURAL PC and NATURAL ARCHITECT WORKSTATION which will be utilizing the capabilities of NATURAL CONNECTION for connectivity in the Software AG environment. In fact, NATURAL CONNECTION is becoming a key cornerstone in Software AG's ISA technology.

For more information on NATURAL CONNECTION, please fill out the information card in this issue or contact your local sales office.

## NATURAL CONNECTION: A Powerful Connectivity Solution



## Solid State Disk Evaluation

Gordon Murphy  
University of North Texas  
COM-LETE Performance and  
Tuning SIG

The computing center at the University of North Texas recently completed an evaluation of solid state disk drives, also known as semiconductor disk (SCD). While a final evaluation is not finished, some preliminary conclusions are readily apparent.

COM-LETE's SD file and all roll datasets associated with our production COM-LETE were placed on the SCD. The device was configured as eight packs of 3380s and connected to a logical channel pair dedicated to the SCD. Total memory on the device is small (128 megabytes), so the datasets selected for placement were just able to fit. The particular device tested has full battery and disk backup for the memory. The backup procedures were tested around seven different times and no problems were encountered.

The SD file was an ideal candidate for placement since this dataset has tens of thousands of I/Os and a small block size. Early indications were that 50% more I/Os were driven and that the device service time decreased by about 90%.

The main incentive for testing the SCD was a belief that the roll datasets would benefit from being placed on a non-rotational device. At first glance this does not appear to be an ideal choice, due to the high data transfer component of the service time to the roll datasets. However, examining the data during the peak online usage shows an extreme (100%) elongation of the service time to the standard 3380 devices on which the roll datasets reside. This is due to miss-reconnects and, to a lesser extent, to a greater channel utilization.

Moving the roll datasets to the SCD device resulted in the total elimination of miss-reconnects and in much greater effective utilization

of the roll channels as measured by channel queue depth. What does this mean in English? It means it was a very good move and a very good choice. Total service time to the roll devices during peak online usage elongated to about 15% to 20% above normal—much better than the 100% elongation associated with rotational devices.

Traditional rules of thumb which apply to standard DASD devices do not apply to SCD devices. The 25% to 30% ceiling on DASD channels (primarily due to miss-reconnects) are not limits for channels dedicated to SCD devices. Percentages as high as 80% were observed with little effect on the channel queue.

What was the overall effect on the CPU? A conservative answer is a 5% to 6% decrease in utilization expressed as an hourly peak average. COM-LETE, ADABAS, and no batch was the workload used for

comparison. Previously, pushing past 85% was impossible to do, but with the SCD, the machine could literally be pegged to the maximum. Drawing conclusions from CPU data can be misleading, but percentage CPU queue data confirms increased CPU efficiency.

Much value was achieved during the test—for non-MVS/XA installations, an SCD could be invaluable. Even in XA sites, a trade-off between more expensive main memory prices and less expensive auxiliary memory should be reason enough for further investigation. Of course, there are many non-COM-LETE datasets that would benefit greatly from SCD devices. These datasets are commonly mentioned by the hardware vendors. One interesting application for study would be the ADABAS associator file. Any volunteers?

## Australia Users' Conference

November 7, 1988 saw the arrival of delegates and guests for the 2nd SPL/Software AG Users' Conference held in Canberra. This was the culmination of three hectic months of work by a small band of SPL staff.

SPL has represented Software AG in Australia and New Zealand, since 1978.

Canberra, the capital city of Australia and the seat of the Federal Parliament, proved a fitting choice of locale as Software AG products are used throughout various Government Departments and Agencies.

The 135 delegates attending represented the 80 plus user organizations in Australia.

The format of the Conference consisted of multi-streamed presentations and concurrent demon-

strations on Fujitsu (IBM compatible), DEC VAX and WANG VS equipment.

Roel Pieper, Software AG, and Tim Wild, Software AG, arrived just after attending the International Users' Conference in Nashville, Tennessee. Their audiences certainly appreciated hearing about new products and product directions firsthand.

The last day of the Conference was devoted entirely to the User Group who arranged papers and presented user experiences with ADABAS/TPF, NATURAL 2 and NATURAL PROCESS just to mention a few.

In summary, delegates left feeling that the Conference, its content, and its organization were excellent and that the three days spent were thoroughly worthwhile.

## 7th Annual Southeast Asia Software AG Users' Group Meeting

This year's conference took place at the Port of Singapore Authority Auditorium on November 10-11, 1988. There were 75 attendees with users coming from Singapore, Malaysia and Hong Kong.

Tim Wild, Director International Marketing for Software AG of North America, was the guest speaker and gave five presentations. Tim's talks featured a review of the International Users' Conference at Nashville, Software AG's CASE direction, open Integrated Communication Architecture, ADABAS TPF/HPE and Software AG's Future Directions.

The Singapore users gave presentations on the following:

- ADABAS Performance Analysis and Tuning
- The Relational Model and ADABAS
- ADABAS VTAM
- Interfacing ACF2 with ADABAS
- NATURAL 2 Migration
- Migrating applications from IBM to VAX and NATURAL 2 Application Development.

Unfortunately there were no presentations from users outside of Singapore. Hopefully we will see better support from the other South East Asia countries next year.

The Conference was concluded with an excellent Chinese Banquet dinner which was noticeably appreciated by the representative from SAGNA.



Over 75 people from Singapore, Malaysia and Hong Kong attended the 7th Annual Southeast Asia Users' Meeting.

## The 9th Annual Israel Users' Group Conference

David Tobias  
*Bank Leumi - Le - Israel B.M.*

The 9th Annual Software AG Users' Group Conference in Israel was held at Kfar Hamaccabia, on December 1, 1988, with 350 attendees from more than 40 organizations.

The main topic of the day was "The Evolving Role of CASE in the 4th Generation Environment", given by Mr. John Gardner, SPL-South Africa. John Gardner spoke about his experience with CASE Technology in general and specifically using Software AG's PREDICT CASE.

### Presentations

After lunch, the meeting was divided into two parallel sessions: Applications, Demonstrations and Integrated Control in ADABAS/NATURAL Environment.

John Gardner gave his follow-up presentation about CASE, demonstrating the process of using PREDICT CASE.

Ms. Sofia Mintz, Ministry of Education, spoke on Methodology for Building Information Systems using NATURAL 2, ADABAS and PREDICT.

Mr. Gilad Waisel, SPL-Israel, gave a presentation on 4th Generation System Software for Integrated Control in the Computer Center. He spoke about new Software AG products, namely, NATURAL PROCESS, NATURAL OPERATIONS, NATURAL CONSOLE and NATURAL NETWORK.

Mr. Shlomo Godick, Mehish Computer Services, shared his experience with running NATURAL directly under VTAM—locally developed by SPL. He pointed out

that moving from NATURAL/TSO to NATURAL under VTAM reduced the CPU consumption by 49%.

Mr. Sagy Snir, Ministry of Defense, talked about ADABAS-VAX Backup and Restore Control System. Basically, the same system can be moved also to the IBM environment.

### General Business

The next Users' Meetings will be held at SPL's offices during the first quarter of 1989. These meetings will be dedicated to specific topics such as NATURAL SECURITY, NATURAL PROCESS and SOFTWARE ENGINEERING.

Elections for new Users' Group Officers will be held in March, 1989.

# ADABAS Product Representative Update



Bob Becker  
*Foremost Insurance*

I realize that by the time one reads this article we will be well into Spring and enjoying the warm temperatures. At the time of writing this we are expecting weather in the 0-10 degree range, so we are in the middle of our Michigan winter which has been mild up to this point in time.

I've had a conversation with Software AG of Darmstadt as well as Software AG in the United Kingdom in regards to a globalized security interface for ADABAS. I wanted to pass on as much information as I can at this point about the plans for a global security interface. Software AG is in the process of writing the interface as well as modifications to the ADABAS nucleus which will allow a focal point for such products as Top Secret,

RAC/F, and ACF2 to communicate to ADABAS. This interface will control all commands as they pass through ADAEXIT1 in ADABAS. Total security will be controlled from the external security system to allow access and retrieval on a file by file basis per job terminal or user. I have not seen the documentation about the global security interface as yet, however it is my belief that it should be available by the summer of '89. The actual release of the interface will be in conjunction with ADABAS 5.2. In speaking with Computer Associates, I have discussed our needs to allow for Top Secret to interface to ADABAS and they are working with the plans of this globalized security interface. This will make all Top Secret security users somewhat pleased. As I find out more details about the product I intend to write future articles in *CONNECTIONS* which will spell out more specifics as to the mechanism of this approach. At this time it does appear that we would be able to use Top Secret to control ADABAS in all ADABAS environments without the need for ADABAS security to be

used at the file level. I have no information about field level or field value security. The globalized security system will be very performance oriented as it will contain in memory tables security issues for validation purposes. These would be loaded from the external security handler.

I would like to invite you to express your comments to me in regards to the security issues. You may feel free to call me at 616-956-2664 about your needs or questions in this area.

The Executive Committee will be meeting in May to discuss various issues at our mid-session meeting which occurs over several days in Denver. If you have any ADABAS concerns that you would like me to bring to the table at this session, please contact me and I will make sure that these issues are consolidated and passed on to the Executive Committee.

Thank you for your interest and I hope to hear from you.

## Communications Functional Area Representative Report



Ellen M. Birch  
*Price Waterhouse*

I enjoyed seeing so many of you in Nashville. I think it was a productive conference, with more lines of communication than ever being developed between the Software AG developers and technical support people and the user community.

As you may know, at the Nashville conference, the COM-LETE product rep responsibilities were redefined to include all communications-related Software AG products. The list of products is still being finalized, but major products now

under the umbrella of the "Communications Functional Area" include all of the IBM and VAX NET-WORK products, COM-LETE (including COM-POSE and ADABAS TPF), NET-PASS, ADABAS HPE, and NATURAL AF. Technical Advisory Committees (TACs) will be formed to address specific areas, each headed by a "Product Representative," who will advise the Functional Area Representative (FAR) on technical issues associated with that product. The purpose of the TACs is to provide technical support to the FAR, who can no longer be expected to be knowledgeable in all of the products for which he or she has responsibility. For this reason, I have asked Chip Gilbert to head up the first TAC, addressing the VAX NET-WORK products, since I have no technical experience with these products. More TACs will be formed as needed.

Some topics of discussion brought up to me at the Nashville conference and since the conference have included:

- **COM-LETE ACF2 support**—Numerous sites have installed this interface. There were some initial problems with 4.4.2, but with fixes to COM-LETE and ACF2, all features should work. I am interested in any experiences with ACF2, Top Secret, or RACF with COM-LETE and will pass those along in future newsletters.
- **ESA support**—Theoretically, ESA should be supported by the current releases of all Software AG products. Use of ESA facilities, however, will be in the future. I am interested in any experiences with ESA.
- **COM-LETE 4.4.2 tape**—Apparently there are several versions of this tape. The correct one to use



































